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(56) Documents cited
GB A 2172796 GB A 2067396 GB 1601408
GB 1594105 GB 1028984 GB 0264733
US 4521128 US 3910706

(58) Field of search
A4K
Selected US specifications from IPC sub-class
A46B

(54) Toothbrush having toothpaste supply

(57) A toothbrush (E) has a container (B) that supplies paste through a capillary (H) and then through an opening (G) and into the bristles (F). The paste is forced through (H) and (G) by means of a paste control knob (A). This rotates the leadscrew (I) that traverses a piston (J) along the internal length of the paste container (B) reducing it volume and pressurising the toothpaste. The brush is kept free from dirt by a detachable cover. The toothpaste container is also the toothbrush handle and can be detached from the stem (D). The container can be replaced when the supply of toothpaste has been exhausted. The leadscrew is held in place by an end cap bearing (K).

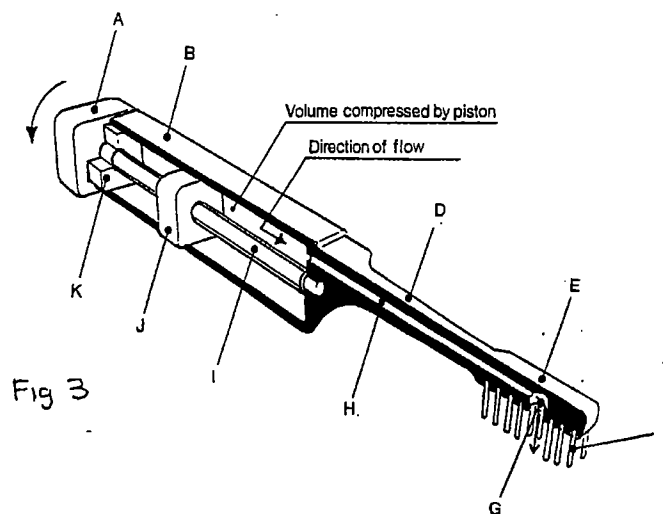
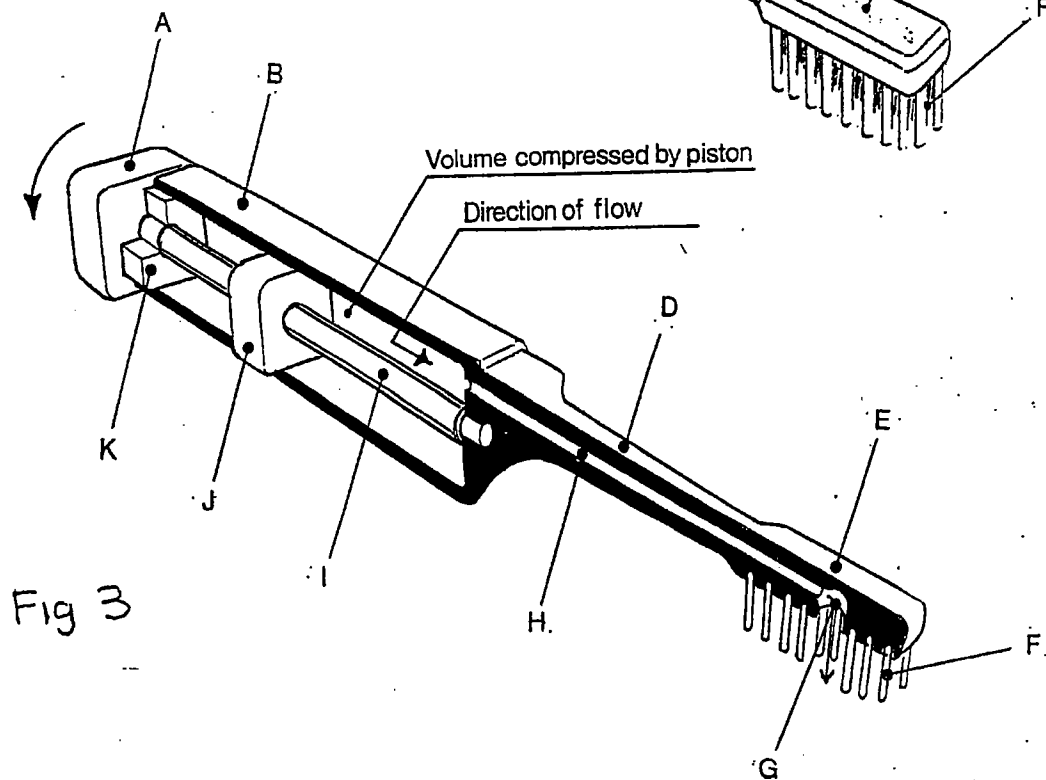
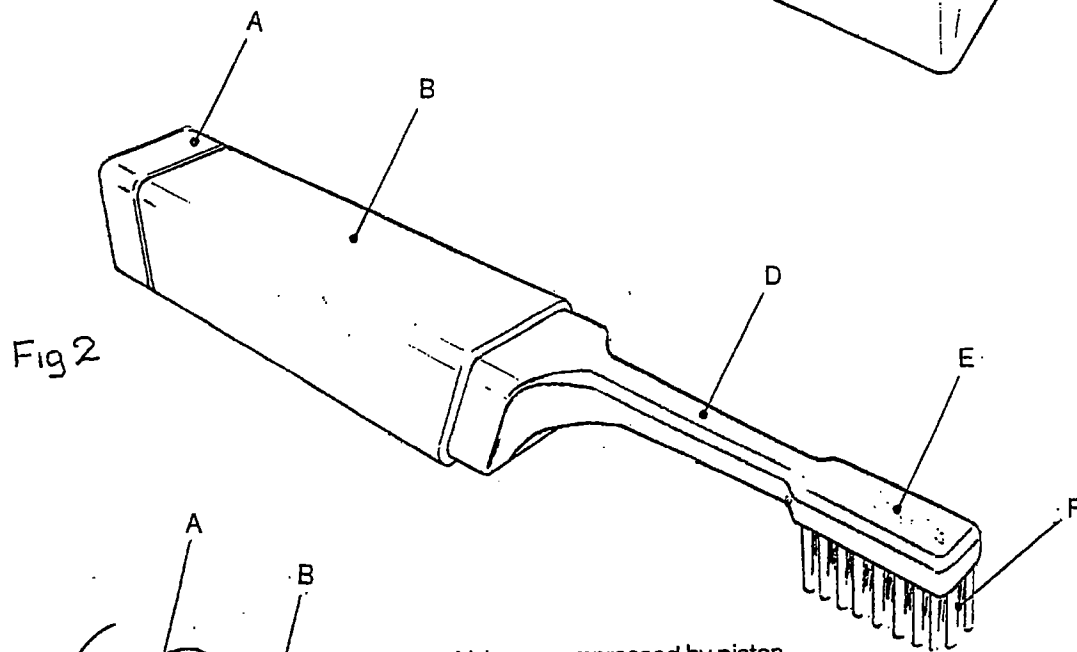
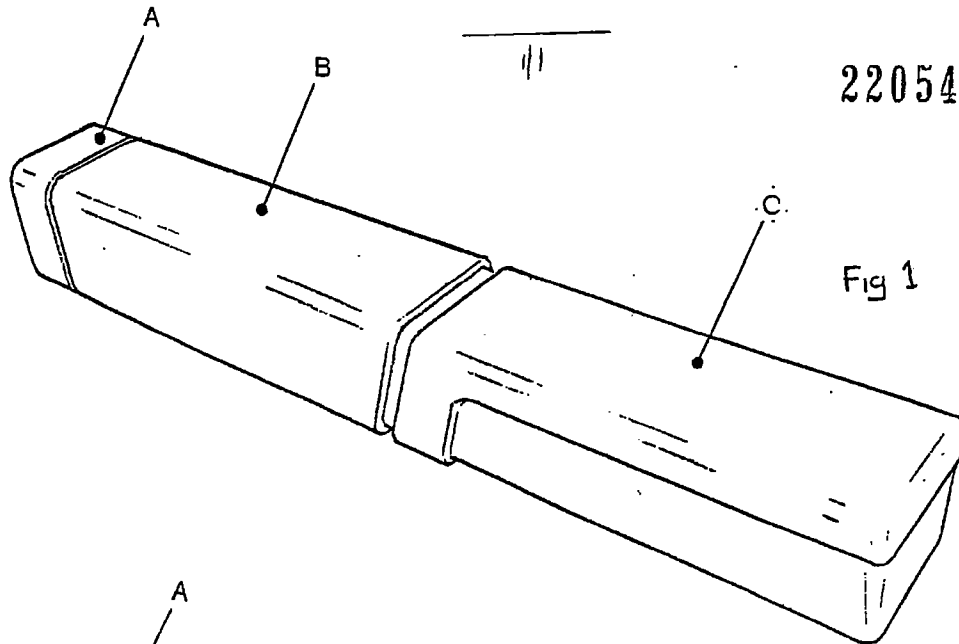


Fig 3

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TOOTHPASTE AND TOOTHBRUSH

This invention relates to a toothbrush with an independent internal supply of toothpaste.

The procedure, universally accepted for cleaning teeth relies on the supply of two separate items, A toothbrush and a tube of toothpaste. A toothbrush is selected from a rack and rinsed in clean running tap water, then a tube of toothpaste is held in one hand and a sealing screw cap is removed. Toothpaste is then forced from the tube onto the brush by squeezing the tube between the thumb and forefinger, when sufficient paste has been applied to the brush the cleaning operation can then commence.

This procedure can be very awkward, time consuming and annoying if the sealing cap or paste were dropped onto the floor or into the sink. It is also very difficult to control the amount of paste that flows from the tube by a squeezing action, especially if the user is elderly, very young or handicapped.

A more efficient cleaning system would be achieved if the toothbrush was amalgamated with the toothpaste tube. The marriage of the two would result in a single self contained unit. For identification and reference purposes let this unit now be known as "Toobabrush".
The cleaning operation would simply be as follows:-

Select the new teeth cleaning unit "Toobabrush", from it's holder, remove the brush cover and rinse the brush head and bristles under clean running tap water. Rotate the paste control knob situated at the opposite end to the brush head one complete turn. This action will supply sufficient paste for one cleaning operation and also reduce any unnecessary waste of paste. When the cleaning operation is complete the brush head is again rinsed, the cover replaced and then it is ready for transportation or to be replaced into it's holder.

When the supply of paste has been exhausted from the container compartment, the ability to separate the brush stem from the container/handle will allow the user to purchase a new full container. The paste of this container will be kept fresh by a thin membrane that will be broken when joined to the brush. This will allow the brush to be reusable and the container to be disposable.

A description of the invention will now be specified with the aid of the following drawings:-

- Figure 1 :- Shows in perspective the toothbrush/toothpaste tube, "Toobabrush". Ready for storage and/or transportation.
- Figure 2 :- Shows in perspective the same product with the brush cover removed and ready for action.
- Figure 3 :- Shows a cut away detail exposing the internal parts and mechanism. This drawing also shows the turning action required to inject the paste through the capillary and into the bristles of the brush.

CLAIMS

- (1) A toothbrush that has it's own internal or external supply of toothpaste.
- (2) A toothbrush joined with a tube of toothpaste regarded as one product with a mechanism, (a piston that is traversed by a leadscrew by way of a rotary motion, or a plunger compressing a stated volume). This injects toothpaste internally through the brush-head by way of a capillary, and through an opening into .. or onto the bristles of the brush - head.
- (3) A toothbrush joined with a tube of toothpaste (as claimed in part 2) with a reusable toothbrush head and disposable handle/toothpaste container.
- (4) A toothbrush joined with a tube of toothpaste (as claimed in part 2) with a reusable toothbrush head and a refillable handle/toothpaste container.
- (5) A toothbrush joined with a tube of toothpaste (as claimed in part 2) that is completely disposable.